

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of) Patent Pending
Torres)
Serial No.: 10/682,586) Examiner: Mr. Phi Dieu N Tran A
Filed: October 9, 2003) Group Art Unit: 3637
For: Stud Spacer for Metal Wall) Confirmation No.: 9767
Attorney's Docket No: 4782-030)
)

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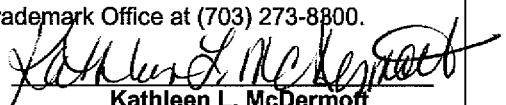
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APPEAL BRIEF

(I.) REAL PARTY IN INTEREST

The real party in interest is The Steel Network, Inc.

(II.) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

(III.) STATUS OF CLAIMS

Claims 1, 6-8, 11, 21-24 and 34-38 are pending and are appealed herein.

Claims 2, 3, 4, 5, 9, 10, 12-20 and 25-33 have been canceled.

(IV.) STATUS OF AMENDMENTS

All amendments have been entered.

(V.) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is directed to a stud spacer **10** that extends between two studs **24** in a wall where each of the studs includes an opening **24C**. See Fig. 1A; page 2, paragraph 2, lines 2-3; page 6, paragraph 3, line 10. The stud spacer includes a main member adapted to extend between two studs. The main member includes first and second end portions. A projection **40** extends from one of the end portions. See Fig. 1A and page 4, paragraph 5, lines 4-6 and page 5, lines 1-3. An opening **42** is formed in the other end portion. See Fig. 1A and page 6, paragraph 1, lines 1-2. The main member includes a pair of side flanges **36** and a pair of end flanges **34**. See Fig 1A and page 5, paragraph 3, 1st sentence. End flanges **34** are adapted to be connected to the two studs that stud spacer **10** extends between. See Fig. 1 and page 5, 2nd full paragraph, 1st sentence. Stud spacer **10** is adapted to be connected to another stud spacer by extending projection **40** of the one stud spacer through opening **42** within one stud and

into the opening of another stud spacer. See Fig. 6 and page 6, paragraph beginning with "Having..." and concluding on page 7, next to last sentence in the paragraph.

Claim 21 calls for a stud spacer **10** that extends between two studs **24**. See Fig. 1 and page 6, paragraph 2, lines 9-10. The stud spacer **10** includes a main member adapted to extend between the two studs. The main member includes first and second end portions. A projection **200** extends from one end portion. See Fig. 7A-7H and page 7, paragraph 4, lines 3-5. There is provided a projection receiver formed on the other end portion. See page 7 paragraph 4, line 5; and page 8, lines 3-7. The projection **200** or projection receiver includes one or more locking members such that when a projection of one stud is projected into the projection receiver of another stud, a locked condition is realized. See Fig. 7H, page 10, lines 6-

Claim 34 calls for a stud spacer **10** that extends between two studs **24**, and which is connected to one or more similar stud spacers. See Fig. 1 and page 6, paragraph 2, lines 9-10. The stud spacer includes a main member. The main member includes opposed end portions. A projection **100** extends from one end portion. Page 10, paragraph 1, line 6. A receiver **102** is disposed on one end portion of the stud spacer and adapted to receive a projection **100** of another stud spacer. See page 10, paragraph 1, lines 7-9. When the two stud spacers are connected together, the projection **100** of one stud spacer will engage and lock with the receiver **102** of another stud spacer. See page 10, paragraph 1, lines 7-9.

(VI.) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 21-24 and 34-38 are anticipated under 35 U.S.C. §102(b) by Vukmanic, U.S. Patent No. 4,677,802.

In construing a disputed claim term, must the Examiner disclose to the Applicant the explicit claim construction given by the Examiner to the disputed claim term?

Whether claims 1, 6-8, 11 are anticipated under 35 U.S.C. §102(b) by Laughlin, et al., U.S. Patent No. 5,619,263.

(VII.) ARGUMENT

A. Claims 21-24 and 34-48 Are Not Anticipated by Vukmanic.

Claims 21 and 34 are as follows:

21. A stud spacer for extending between two studs comprising:
a main member adapted to extend between the two studs;
the main member including first and second end portions;
a projection extending from one end portion;
a projection receiver formed on the other end portion;
and
wherein either the projection or projection receiver includes one or more locking members such that when a projection of one stud spacer is projected into the projection receiver of another stud spacer a locked condition is realized.

34. A stud spacer for extending between two studs and connected to one or more similar stud spacers, comprising:
 - a main member;
 - the main member having opposed end portions;
 - a projection extending from one end portion;

- d. a receiver disposed on the other end portion and adapted to receive a projection of another stud spacer; and
- e. wherein when two stud spacers are connected together the projection of one stud spacer will engage and lock with the receiver of another stud spacer.

1. **In construing a disputed claim term, must the Examiner, when requested, disclose the claim construction to the Applicant, or can the Examiner refuse to disclose the claim construction and maintain that whatever the construction the prior art falls within the scope of the construction?**

In *ex parte* prosecution, this may be a novel question of law. Applicants have been unable to find any authority addressing this issue.

Certainly, claim construction is a vital and essential part of any patentability analysis in *ex parte* prosecution. Examiners are required to construe disputed claim terms. Only after the claims are construed, can the Examiner apply prior art. The MPEP, precedent of this Board, as well as Federal Circuit authority, holds that disputed claim terms in *ex parte* prosecution must be construed.

Section 2111.01 of the MPEP sets forth the basic rules of claim construction in *ex parte* prosecution. The words of the claim must be given their plain and customary meaning unless the plain meaning is inconsistent with the specification. See *In re Zelz*, 893 F.2d, 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). The ordinary and customary meaning of a term may be evidenced by a variety of sources including the specification, the prosecution history, the words of the claims themselves, and extrinsic evidence concerning the meaning of technical terms and the state of the art. *Phillips v.*

AWH Corp., 415 F.3d 1303, 1314, 75 U.S.P.Q.2d 1321, 1327 (Fed. Cir. 2005) (*en banc*).

The issue presented here is, what must the Examiner do to appropriately comply with the requirement to construe a disputed claim term? In this case, the Examiner was repeatedly requested to construe the claim terms “stud” and “stud spacer”. On at least three different occasions the Examiner was requested to disclose his construction of these terms. See Applicant’s Office Action responses of June 30, 2008, October 20, 2006, and July 14, 2006. The Examiner refused each request to disclose his claim construction. Thus, the issue here is, if requested by the Applicant, must the Examiner explicitly set forth his or her construction based on Section 2111.01 MPEP and the basic law of claim construction; or, can the Examiner refuse to disclose the construction and simply maintain that a part or feature of the applied prior art meets the disputed claim term? It is difficult to see how the claims can be fairly and thoroughly construed without Applicants’ knowing the Examiner’s construction of the disputed claim term.

Many times, Examiners, as a manner of course, disclose their claim construction. Applicants do not contend that the practice complained of here is routine.

When the Examiner refuses to disclose the claim construction, the Applicant is left with little knowledge of the construction except, again, that whatever construction was imparted to the claim term, it is broad enough to encompass a part or feature of the applied prior art. In these cases, the Applicants do not know if the Examiner gave the disputed claim term its plain and ordinary meaning, if the construction is consistent with the specification, or if the construction is consistent with how a person of ordinary skill in the art would construe the term. In other words, the Applicant has no way of knowing if

Section 2111.01 of the MPEP has been complied with, or if the construction comports with the basic canons of claim construction. Most importantly, without knowing the Examiner's construction, the Applicants have no way of effectively contesting or traversing the claim construction. In the end it is difficult, if not impossible, for the Applicants to challenge the claim construction.

An Applicant should not be left to speculate as to the Examiner's construction. When the Examiner refuses to divulge the construction, an Applicant cannot look at the applied prior art and determine with any degree of certainty the claim construction that was applied. While the Applicant can guess or speculate, there may be an infinite number of materially different constructions that would encompass a part or feature of the prior art being applied. Again, there is no way for the Applicant to know if the Examiner correctly applied the plain and customary meaning for the term, construed the term consistent with the specification, or construed the term consistent with how a person of ordinary skill in the art would have construed the same.

Logic is of little help traversing a claim construction issue where the Examiner refuses to disclose the claim construction. Here, the Applicant is left to argue that whatever the construction, the construction is unreasonably broad. Again, Applicant cannot attack the basis for the construction because the construction is unknown.

Fundamentally, claim construction cannot be carried out without disclosing the construction. If the Examiner's construction is withheld, can that really constitute claim construction? Notwithstanding, the advantages of disclosing the claim construction far outweigh the disadvantages. Certainly, by disclosing the claim construction to the Applicant, there will be a more accurate claim construction. This will not change the

basic law with respect to *ex parte* claim construction. Still, the Examiner can give the disputed claim term the broadest reasonable construction consistent with the specification. The point here is that the Examiner should be required to disclose the broadest reasonable construction to the Applicant. By knowing how the Examiner construes a claim term, the Applicant has an opportunity to amend the claim and better define the invention over the prior art. This should result in less appeals. In addition, the public interest is served by an open claim construction process because in the end the claim as a whole is clearer and perhaps more definite. This serves the public notice function of the claim.

The requirement for an explicit construction is not burdensome or unreasonable. Here, for example, the claim terms in dispute are "stud" and "stud spacer". Certainly, as required, the Examiner construed these terms. Requiring the Examiner to disclose a construction that already has been made is not burdensome or unreasonable. This is especially true considering the fundamental role that claim construction plays in a patentability analysis.

Applicants understand that the Board, from time-to-time, engages in claim construction and sometimes expressly states the construction. However, an Applicant should not have to appeal an Examiner's decision to obtain a claim construction. That is a very expensive and time-consuming approach to such a fundamental principle of patent law.

There is danger in condoning a practice where the Examiner is not required to disclose to the Applicant the claim construction. The danger is that the claim construction step may be skipped or casually approached by looking at the disputed

claim term and simply concluding, without a construction, that a part or feature of the applied prior art meets that term. In such cases the canons of claim construction are not applied. If this happens, there is a chance that in a significant number of cases that the claim construction is wrong.

The Board is respectfully urged to separately address this issue and to specifically hold that when a claim construction term is clearly in dispute and the Applicant requests the Examiner to disclose his or her claim construction, that the Examiner must do so.

2. Properly construed, the claims are not anticipated by Vukmanic.

As noted above, the first step in a Section 102 analysis is claim construction. All claim terms that are in dispute must be construed.

Based on the specification including the drawings and the customary and ordinary meaning of the term "stud spacer," the term "stud spacer" as used in the present application means a structural member interposed between studs in a wall for holding the studs a given distance from each other. Again, that construction is consistent with the customary and ordinary meaning of the term "stud spacer," consistent with Applicants' specification, and consistent with how a person of ordinary skill in the art would construe the term.

Regarding the ordinary meaning of the term "stud", the McGraw-Hill Dictionary of Scientific and Technical Terms defines "stud" as follows:

One of the vertical members in the walls of a frame building to which wallboards, lathing, or paneling is nailed or fastened.

See Exhibit 1. (Evidence entered into record at page 9 of Applicant's response of July 14, 2006).

Certainly, this definition of "stud" is consistent with how Applicants have used the term in their specification. A person of ordinary skill in the art would likewise view the term "stud" as referring to a vertical member in a wall structure.

The same McGraw-Hill Dictionary of Scientific and Technical Terms defines "spacer" as:

A device for holding two members at a given distance from each other.

See Exhibit 2. (Evidence entered into record at page 9 of Applicant's response of July 14, 2006).

Thus, the term "stud spacer" means a structural member interposed between studs of a wall for holding the studs at a given distance from each other. This construction is consistent with Applicants' specification and how a person of ordinary skill in the art would construe the term.

Vukmanic does not disclose a stud or a stud spacer. Indeed, Vukmanic does not even show or discuss a wall structure. Instead, Vukmanic discloses a ceiling suspension system that includes main runners 11 and cross runners 12 for supporting ceiling tiles. The Examiner finds that the runners 11 are studs, and that cross runners 12 in the ceiling system constitutes stud spacers. This finding is error. It is contrary to the proper construction of "stud" and "stud spacer." A ceiling structure is not a wall, and structural components of a ceiling structure can never be deemed a stud or a stud spacer.

All of Applicants' claims are restricted to a stud spacer for extending between studs. Claim 1, for example, recites the term "stud spacer" in both the preamble and body of the claim. Hence, Applicants' claims cannot be anticipated by a reference that does not disclose studs or stud spacers.

3. The Examiner's finding that Vukmanic discloses a stud spacer is unsupported.

The Examiner's Section 102 rejection rests entirely on the finding that Vukmanic discloses a stud spacer. The Examiner found: "Vukmanic shows a stud spacer (12) for extending between two studs with each stud having an opening therein..." Final Office Action, page 3. That finding is unsupported. That is, there is no substantial evidence that will support that finding. The structure 12 shown in Vukmanic is not a stud spacer. On the contrary, it is a cross runner found in a ceiling structure for supporting ceiling tiles. That finding or that fact is incontrovertible.

These findings bring into focus the shortcomings of the Examiner's Section 102 analysis. That is, if the Examiner had properly construed the term "stud spacer", then it would have been clear that the cross runner 12 in Vukmanic does not meet the stud spacer limitation in the claims.

4. The claim term “stud spacer” is a structure and not an intended use phrase.

The Examiner appears to maintain that a stud spacer is not a structural member, but simply an expression of an intended use. Respectfully, Applicant disagrees. The term “stud spacer” is a term of art widely used to describe a structural component of a wall. Persons of ordinary skill extensively refer to stud spacers as structural members in a wall, and the customary and ordinary meaning of “stud spacer”, as discussed above, is consistent with its use as a term of art.

Many U.S. patents illustrate that the term “stud spacer” is a structure and is commonly referred to as a structure - not an intended use. The use of “stud spacer” as an ordinary term for defining a structure in a wall is evidenced in various U.S. patents. For example, see U.S. Patent No. 6,843,035 which refers to a prior art patent which reveals the use of a “stud spacer” used in construction. U.S. Patent No. 5,274,973 is directed to a Stud Spacer and a Mounting System. U.S. Patent No. 4,625,415, again, relates to a stud spacer. U.S. Patent No. 4,595,165 refers to a 2 x 4 stud spacer. U.S. Patent No. 4,155,208 is directed to a building insulation and refers to stapling a structure to a stud spacer.

B. Claims 1, 6-8, and 11 Are Not Anticipated by Laughlin et al.

Claim 1 is as follows:

A stud spacer for extending between two studs with each stud having an opening therein, the stud spacer comprising:

 a main member adapted to extend between the two studs; the main member including first and second end portions; a projection extending from one of the end portions; an opening formed in the other end portion; wherein the main member includes a pair of side flanges and a pair of end flanges; wherein the end flanges are adapted to be connected to the two studs that the stud spacer extends between; and wherein the stud spacer is adapted to be connected to another stud spacer by extending the projection of the one stud spacer through the opening within one stud and into the opening of another stud spacer.

The Examiner has failed to find a stud spacer that meets the limitations of these claims or which can be combined with other relevant prior art to render the claims obvious. In addressing patentability, the Examiner has moved from the stud spacer field and attempted to find structures that can be argued to be capable of performing the function of the claimed stud spacer. The Examiner relies totally on a "capable of" argument to make out an anticipation case. Respectfully, the Examiner has failed. The strut 50 in Laughlin is not capable of functioning as the claimed stud spacer. Furthermore, the entire "capable of" theory used by the Examiner in making out an anticipation case is highly suspect in a case like the present one. As discussed below, there is no anticipation of these claims.

1. Properly construed, a “stud spacer” is not found in the Laughlin patent.

The claim construction issues discussed above also apply to this rejection. All of the claims at issue here include the recitation of a stud spacer. As discussed above, this is a structural term and properly construed, is not met by the strut 50 in Laughlin. The strut 50 in Laughlin clearly is not a stud spacer but is used to support a box 90 between a pair of T-bars 120, 122 in a ceiling. The strut 50 is not even a spacer. It is only an elongated support used to support the box 90 in a ceiling. See Figure 18 of the Laughlin patent.

2. The Laughlin strut is not capable of meeting the limitations of these claims

It is questionable whether the “capable of” approach to patentability can be indiscriminately applied as it has been applied in this case. Notwithstanding, even if applicable, there are structural and functional differences between the claimed invention and the Laughlin patent.

Claim 1 requires that the main member of the stud spacer include a projection extending from one end portion and an opening formed in the other end portion for receiving the projection of another stud spacer. This enables the stud spacers to be connected end-to-end. See Figures 2 and 4 depicted below which were taken from Applicant’s drawings.

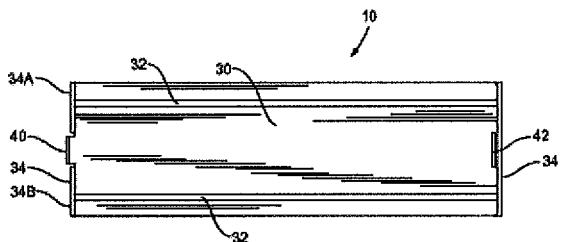


FIG. 2

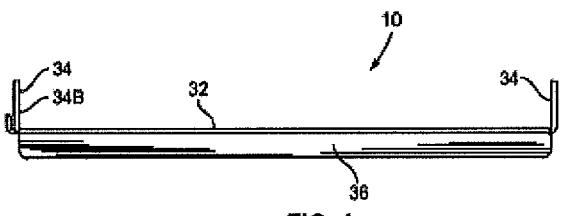


FIG. 4

Note the projection 40 and the opening 42 shown in Figure 2. When the stud spacers are connected, the projection 40 projects through an opening in the stud and through opening 42 of a like stud spacer. This is illustrated in Figure 1A depicted below.

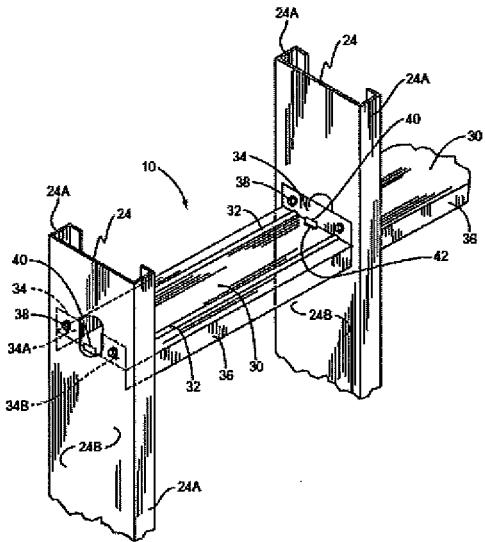


FIG. 1A

The Examiner, in analyzing the Laughlin strut, refers to finger 64 as a projection and refers to the space between the finger 64 and U-shaped finger 66 as the claimed opening. Nothing in Laughlin shows or describes the member 64 at one end of the strut projecting into the so-called opening on the other end of a like strut. Indeed, the ends of the struts are designed to clamp around the T-bars 120, 122 as shown in Figure 18 of Laughlin.

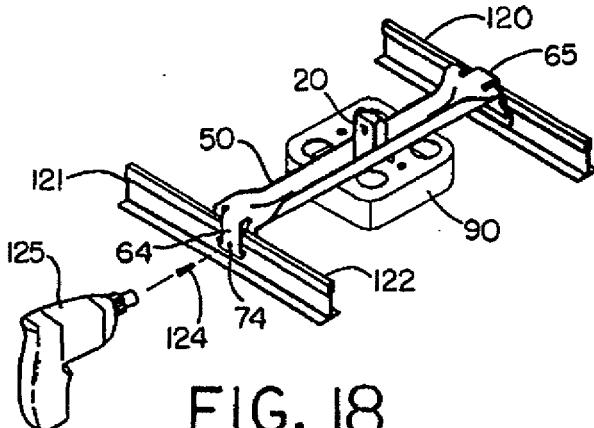


FIG. 18

Thus, it is not seen how member 64 once clamped to T-bar 122 can indeed project through an opening in a stud and through the so-called opening on the end of another strut.

Claim 1 calls for the main member to include a pair of end flanges. The claim also requires that the end flanges are adapted to be connected to the two studs that the stud spacer extends between. The Examiner in applying Laughlin takes the position that the claimed end flanges in Laughlin are the parts of U-shaped finger 66 on the left and right of finger 64. See Final Office Action, p. 4. Claim 1 also requires that the end flanges be adapted to be connected to the studs and that the projection on one end of

the stud spacer project into an opening in the other end of another stud spacer. The Laughlin strut is not capable to achieving such a structural relationship. When the end of the strut 50 is clamped onto the T-bar 122 as shown in Figure 18 of Laughlin, it is not reasonable or possible for another so-called projection 64 to be inserted into the alleged opening that surrounds a like member 64.

It should be pointed out that the so-called opening in Laughlin's strut is filled when the fingers 64 and 66 clamp around the T-bar. See Figure 18 of Laughlin. If the alleged opening is filled with a T-bar or even the web of a stud, then it follows that the finger 64 in the Laughlin strut would not be capable of being projected into the opening. Again, the opening is filled by the T-bar or the web of a stud.

3. The Examiner's findings of fact are conclusionary and unsupported

Claim 1, for example, includes the following limitation:

wherein the stud spacer is adapted to be connected to another stud spacer by extending the projection of the one stud spacer through the opening within one stud and into the opening of another stud spacer.

The Examiner's entire fact finding exercise with respect to this limitation in claim 1 is simply reciting back the claim language. More particularly, in dealing with these elements and limitations of claim 1, the Examiner, relying on Laughlin to meet this portion of the claim, concludes as follows:

And wherein one stud spacer is adapted to be connected to another stud spacer by extending the projection of the one stud spacer through the opening within one stud and into the opening of another stud spacer (able to function as claimed),

Final Office Action, p. 4

There is no fact finding or any analysis here. The Examiner has simply recited what the claim recites. It is not at all clear how the Laughlin strut is capable of meeting these limitations. It is at least incumbent upon the Examiner to tell the Applicants how the so-called projection 64 in Laughlin could be extended through an opening in a stud, and at the same time extended into an opening on the opposite end of another strut.

The Examiner in applying Laughlin states that the claimed opening on the other end portion of the strut is the slot in Laughlin that surrounds the projection 64. It is not altogether clear what particular slot or opening that the Examiner is referring to in Laughlin. But, the more important problem is that it is unclear how the so-called projection 64 could possibly be extended through an opening in a stud and also into an opening on the opposite end of another strut without materially deforming the strut. Certainly it is not a matter of simply inserting the member 64 into an opening on the opposite end of another strut. The so-called opening in the Laughlin strut is closed at the top. Therefore, it is impossible for the member 64 to be inserted downwardly into a slot or opening. But the problem is how could the member 64 be extended through an opening in a stud and somehow oriented such that it could be extended into the alleged opening on the other end of another strut and at the same time the alleged end flanges be connected to the stud. That is not at all clear. And the Examiner has not explained how this could occur.

Applicants maintain that the Laughlin strut is not capable of meeting the recited language in claim 1. Importantly however, it is at least incumbent upon the Examiner to set forth clear and detailed facts that show that there is a reasonable basis for facts

found. Simply reciting claim language is insufficient, especially where the capabilities of the prior art are not readily apparent, which is certainly the case here.

When applying this "capable of" patentability analysis, it is important that the analysis be carried out with respect to the entire claim in a single instance. That is, it is improper to find that the alleged prior art is capable of meeting the limitations of a portion of the claim in one instance, and then capable of meeting other portions of a claim in another instance. In this case, claim 1 requires that the end flanges be adapted to be connected to a stud. At the same time the claim requires the projection of one stud spacer be extended through an opening in a stud and into the opening in another stud spacer. The alleged prior art must be capable of doing all of that at the same time because unless the alleged prior art can accomplish all of that at the same time, it cannot be anticipated. Here there is no fact finding that the strut 50 of Laughlin is capable of being applied where the end flanges are connected to a stud and at the same time the alleged projection 64 is capable of being extended through an opening in a stud and further being capable of being extended into an opening of another strut or stud spacer. There is no such finding of fact. In reality the strut of Laughlin is incapable of such.

4. The Laughlin struts are not adapted to be connected

Claim 1 requires that the stud spacer be adapted to be connected to another stud spacer. Clearly, the strut in Laughlin is not adapted to be connected to another strut. See Laughlin, Fig. 18. Furthermore, it is not readily apparent that the strut is capable of

being connected to another strut. The Examiner has not explained the factual basis for the strut being capable of being connected to another strut.

CONCLUSION

For the foregoing reasons, the Board is respectfully urged to hold that the Examiner cannot refuse to disclose a claim construction of a clearly disputed claim term when requested by the Applicant. Further, the Board is respectfully urged to reverse the rejections of the Examiner in this case.

(VIII.) CLAIMS APPENDIX

1. A stud spacer for extending between two studs with each stud having an opening therein, the stud spacer comprising:
 - a main member adapted to extend between the two studs;
 - the main member including first and second end portions;
 - a projection extending from one of the end portions;
 - an opening formed in the other end portion;
 - wherein the main member includes a pair of side flanges and a pair of end flanges;
 - wherein the end flanges are adapted to be connected to the two studs that the stud spacer extends between; and
 - wherein the stud spacer is adapted to be connected to another stud spacer by extending the projection of the one stud spacer through the opening within one stud and into the opening of another stud spacer.
6. The stud spacer of claim 1 wherein the main member includes a central section and wherein the side flanges are turned out of the plane of the central section.
7. The stud spacer of claim 6 wherein the end flanges and the side flanges are turned in opposite directions with respect to the central section.
8. The stud spacer of claim 1 wherein at least one end flange is divided into at least two portions and wherein the projection extends between the two portions.
11. The stud spacer of claim 1 wherein the opening formed in the second end portion of the main member includes a slot.

21. A stud spacer for extending between two studs comprising:
 - a main member adapted to extend between the two studs;
 - the main member including first and second end portions;
 - a projection extending from one end portion;
 - a projection receiver formed on the other end portion; and
 - wherein either the projection or projection receiver includes one or more locking members such that when a projection of one stud spacer is projected into the projection receiver of another stud spacer a locked condition is realized.
22. The stud spacer of claim 21 wherein either the projection or projection receiver includes one or more stops for engaging the one or more locking members.
23. The stud spacer of claim 22 wherein the locking members are disposed on the projection and the stops form a part of the projection receiver.
24. The stud spacer of claim 21 wherein at least a portion of the projection is deflectable in response to the projection engaging the projection receiver.
34. A stud spacer for extending between two studs and connected to one or more similar stud spacers, comprising:
 - a. a main member;
 - b. the main member having opposed end portions;
 - c. a projection extending from one end portion;
 - d. a receiver disposed on the other end portion and adapted to receive a projection of another stud spacer; and

e. wherein when two stud spacers are connected together the projection of one stud spacer will engage and lock with the receiver of another stud spacer.

35. The stud spacer of claim 34 wherein the projection and receiver are disposed such that when consecutive stud spacers are connected together, the projections and receivers will overlie each other.

36. The stud spacer of claim 34 wherein both the projection and receiver include a flap that is at least partially flexible.

37. The stud spacer of claim 36 wherein in a locked position, the flaps of the projection and receiver engage each other.

38. The stud spacer of claim 34 wherein both the projection and receiver include a flexible flap, a hold down element, an opening disposed between the flap and the hold down element, a deflector, and an opening disposed between the deflector and the hold down element.

(IX.) EVIDENCE APPENDIX

Exhibit 1: Definition of "stud" from McGraw-Hill Dictionary of Scientific and Technical Terms. (Evidence entered into record at page 9 of Applicant's response of July 14, 2006).

Exhibit 2: Definition of "spacer" from McGraw-Hill Dictionary of Scientific and Technical Terms. (Evidence entered into record at page 9 of Applicant's response of July 14, 2006).

(X.) RELATED PROCEEDINGS APPENDIX

None.

Appeal Brief for Application Ser. No. 10/682,586
Attorney Docket No. 4782-030
Client Ref. No. IP-P-016

Respectfully submitted,

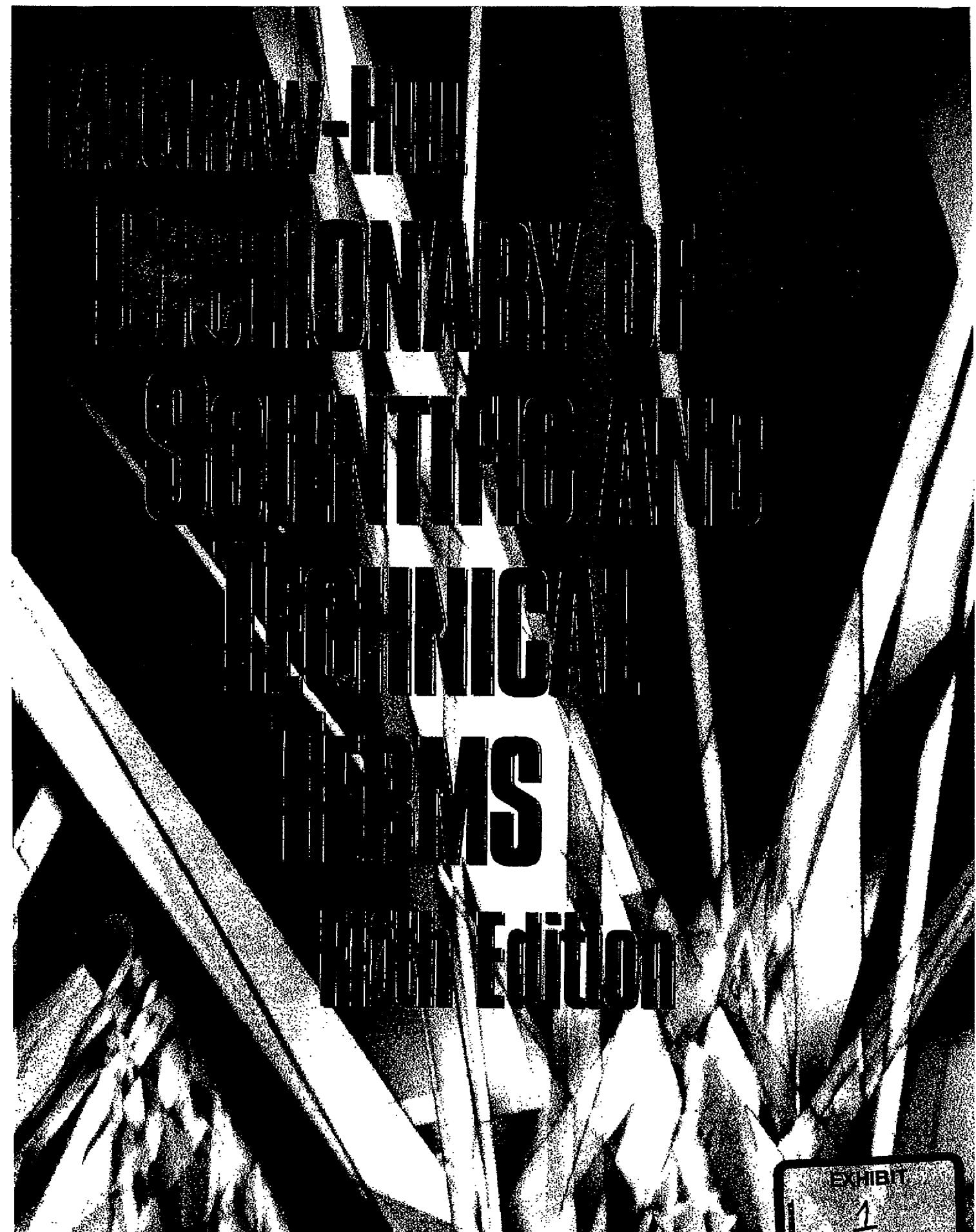
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**On the cover: Photomicrograph of crystals of vitamin B₁.
(Dennis Kunkel, University of Hawaii)**

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McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS, Fifth Edition

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5 6 7 8 9 0 DOW/DOW 9 9

ISBN 0-07-042333-4

Library of Congress Cataloging-in-Publication Data

**McGraw-Hill dictionary of scientific and technical terms /
Sybil P. Parker, editor in chief.—5th ed.**

p. cm.

ISBN 0-07-042333-4

1. Science—Dictionaries. 2. Technology—Dictionaries.

I. Parker, Sybil P.

Q123.M34 1993

503—dc20

93-34772

CIP

INTERNATIONAL EDITION

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stub matching

stub matching [ELECTROMAG] Use of a stub to match a transmission line to an antenna or load; matching depends on the spacing between the two wires of the stub, the position of the shorting bar, and the point at which the transmission line is connected to the stub. { 'stəb ,mæt'chɪŋ }

stub mortise [ENG] A mortise which passes through only part of a timber. { 'stəb ,mɔr'təs }

stubs gage [DES ENG] A number system for denoting the thickness of steel wire and drills. { 'stəbz ,gæj }

stub-supported coaxial [ELECTROMAG] Coaxial whose inner conductor is supported by means of short-circuited coaxial stubs. { 'stəb ,sə'pɔ:dəd kɔ'ak'siəl }

stub-supported line [ELECTROMAG] A transmission line that is supported by short-circuited quarter-wave sections of coaxial line; a stub exactly a quarter-wavelength long acts as an insulator because it has infinite reactance. { 'stəb ,sə'pɔ:dəd līn }

stub switch [ENG] A pair of short switch rails, held only at or near one end and free to move at the other end; used in mining

and to some extent on narrow-gage industrial tramways. { 'stəb ,swit'ch }

stub tenon [ENG] A tenon that fits into a stub mortise. { 'stəb ,ten'ən }

stub tube [MECH ENG] A short tube welded to a boiler or pressure vessel to provide for the attachment of additional parts. { 'stəb ,tūb }

stub tuner [ELECTROMAG] Stub which is terminated by movable short-circuiting means and used for matching impedance in the line to which it is joined as a branch. { 'stəb ,tūnər }

stucco [MATER] A smooth plasterlike material applied to the outside wall or other exterior surface of a building or structure. { 'stuk'ō }

stud [BUILD] One of the vertical members in the walls of a framed building to which wallboards, lathing, or paneling is nailed or fastened. [DES ENG] 1. A rivet, boss, or nail with a large, ornamental head. 2. A short rod or bolt threaded at both ends without a head. { 'stid }

stud driver [MECH ENG] A device, such as an impact wrench, for driving a hardened steel nail (stud) into concrete or other hard materials. { 'stid ,drif'ver }

Student's distribution [STAT] The probability distribution used to test the hypothesis that a random sample of n observations comes from a normal population with a given mean. { 'styd'əntz ,distr'iby'shən }

Student's t-statistic [STAT] A one-sample test statistic computed by $T = \sqrt{n}(\bar{X} - \mu_H)/S$, where \bar{X} is the mean of a collection of n observations, S is the square root of the mean square deviation, and μ_H is the hypothesized mean. { 'styd'əntz 'te stə,tis'tik }

Student's t-test [STAT] A test in a one-sample problem which uses Student's t-statistic. { 'styd'əntz 'tē ,test }

studio [COMMUN] A room in which television or radio programs are produced. { 'stüd'ēō }

stud-link chain [NAV ARCH] Chain in which each link has a stud at its midlength perpendicular to the major axis to maintain the shape of the link. { 'stib ,līnk ,chān }

stud wall [BUILD] A wall formed with timbers; studs are usually spaced 12-16 inches (30-41 centimeters) on center. { 'stib ,wol }

stud welding [MET] Arc-welding using the heat of an electric arc produced between a metal stud and another part, and then bringing the parts together under pressure. { 'stid ,weld'ɪŋ }

stuffed mineral [MINERAL] A mineral having extrusions of a foreign element within its larger interstices. { 'staf'tid 'mīnərəl }

stuffing [ENG] A method of sealing the mechanical joint between two metal surfaces; packing (stuffing) material is inserted within the seal area container (the stuffing or packing box), and compressed to a liquid-proof seal by a threaded packing ring follower. Also known as packing. { 'staf'ɪŋ }

stuffing box [ENG] A packed, pressure-tight joint for a rod that moves through a hole, to reduce or eliminate fluid leakage. { 'staf'ɪŋ ,bäks }

stuffing nut [ENG] A nut for adjusting a stuffing box. { 'staf'ɪŋ ,nüt' }

stull [MIN ENG] A platform laid on timbers, braced across a working from side to side, to support workers or to carry ore or waste. { 'stol' }

stull piece [MIN ENG] 1. A piece of timber placed slanting over the back of a level to prevent rock falling into the level

from the stopes above. 2. Timbers bracing the platform of a stull. { 'stol' ,pēs }

stull stoping [MIN ENG] Stull timbers placed between the foot and hanging walls, which constitute the only artificial support provided during the excavation of a stope. { 'stol' ,stōp'ɪŋ }

stump [MIN ENG] A small pillar of coal left between the gangway or airway and the breasts to protect these passages; any small pillar. { 'stomp' }

stunt [PL PATH] Any of several plant diseases marked by reduction in size of the plant. { 'stent' }

stunt box [ELEC] A device to control the nonprinting functions of a teletypewriter terminal. { 'stent' ,bäks }

stupp [MIN ENG] A black residue from distilled mercury ore, consisting of soot, hydrocarbons, mercury and mercury compounds, and ore dust. { 'stōp' }

sturgeon [VERT ZOO] Any of 10 species of large bottom-living fish which comprise the family Acipenseridae; the body has five rows of bony plates, and the snout is elongate with four barbels on its lower surface. { 'stürdʒən' }

Sturges rule [STAT] A rule for determining the desirable number of groups into which a distribution of observations should be classified; the number of groups or classes is $1 + 3.3 \log n$, where n is the number of observations. { 'stürdʒəs ,rūl' }

Sturm-Liouville problem [MATH] The general problem of solving a given linear differential equation of order $2n$ together with $2n$ -boundary conditions. Also known as eigenvalue problem. { 'stürm lüü'vel ,prōblēm' }

Sturm-Liouville system [MATH] A given differential equation together with its boundary conditions having Sturm-Liouville problem form. { 'stürm lüü'vel ,süstəm' }

Sturm sequence [MATH] For a polynomial $p(x)$, this is the sequence of functions $f_0(x), f_1(x), \dots$, where $f_0(x) = p(x), f_1(x) = p'(x)$, and $f_n(x)$ is the negative remainder that occurs by finding the greatest common divisor of $f_{n-2}(x)$ and $f_{n-1}(x)$ via the Euclidean algorithm. { 'stürm ,sükweəns' }

Sturm's theorem [MATH] This gives a method to determine the number of real roots of a polynomial $p(x)$ which lie between two given values of x ; the Sturm sequence of $p(x)$ provides the necessary information. { 'stürd'z ,thürm' }

stürnite [MINERAL] A black mineral composed of hydrous silicate of iron, manganese, calcium, and magnesium; occurs in compact masses. { 'störd'z ,stürnīt }

stutter [COMMUN] Series of undesired black and white lines sometimes produced when a facsimile signal undergoes a sharp amplitude change. [MSD] A speech disorder marked by repetition of words, syllables, or sounds, or by hesitations in manner by the speaker. { 'stüd'ər }

Stuve chart [METEOROL] A thermodynamic diagram with atmospheric temperature as the x axis and atmospheric pressure to the power 0.286 as the y ordinate, increasing downward; named after G. Stuve. Also known as adiabatic chart; pseudoadiabatic chart. { 'stüv'ə ,chārt' }

Swist [TEXT] A left-handed yarn twist in which the spirals resemble the letter S. { 'es ,twist' }

sty See hordeolum. { 'stī' }

Stygines [INV ZOO] A subfamily of butterflies in the family Lycaenidae in which the prothoracic legs in the male are non-functional. { 'stüj'ənēz' }

Stygocardiaceae [INV ZOO] An order of crustaceans in the superorder Syncarida characterized by having a furca. { 'stig'ō,kār'dēsēz' }

Styliasterina [INV ZOO] An order of the class Hydrozoa, including several brightly colored branching or encrusting coral-like cnidarians of warm seas. { 'stüli'ästər'ēnə' }

style [BOT] 1. The portion of a pistil connecting the stigma and ovary. [ENG] See gynostem. [ZOO] A slender elongated process on an animal. { 'stil' }

stylet [GRAPHICS] A slender, pointed marking tool, as one used in graving. [INV ZOO] A slender, rigid, elongated appendage. [MED] 1. A slender probe used for surgery. 2. A thin wire inserted in a catheter to provide support or in a hollow needle to clear the passage. { 'stü'lit' }

styloglossus [ANAT] A muscle arising from the styloid process of the temporal bone, and inserted into the tongue. { 'stü'läglos'səs' }

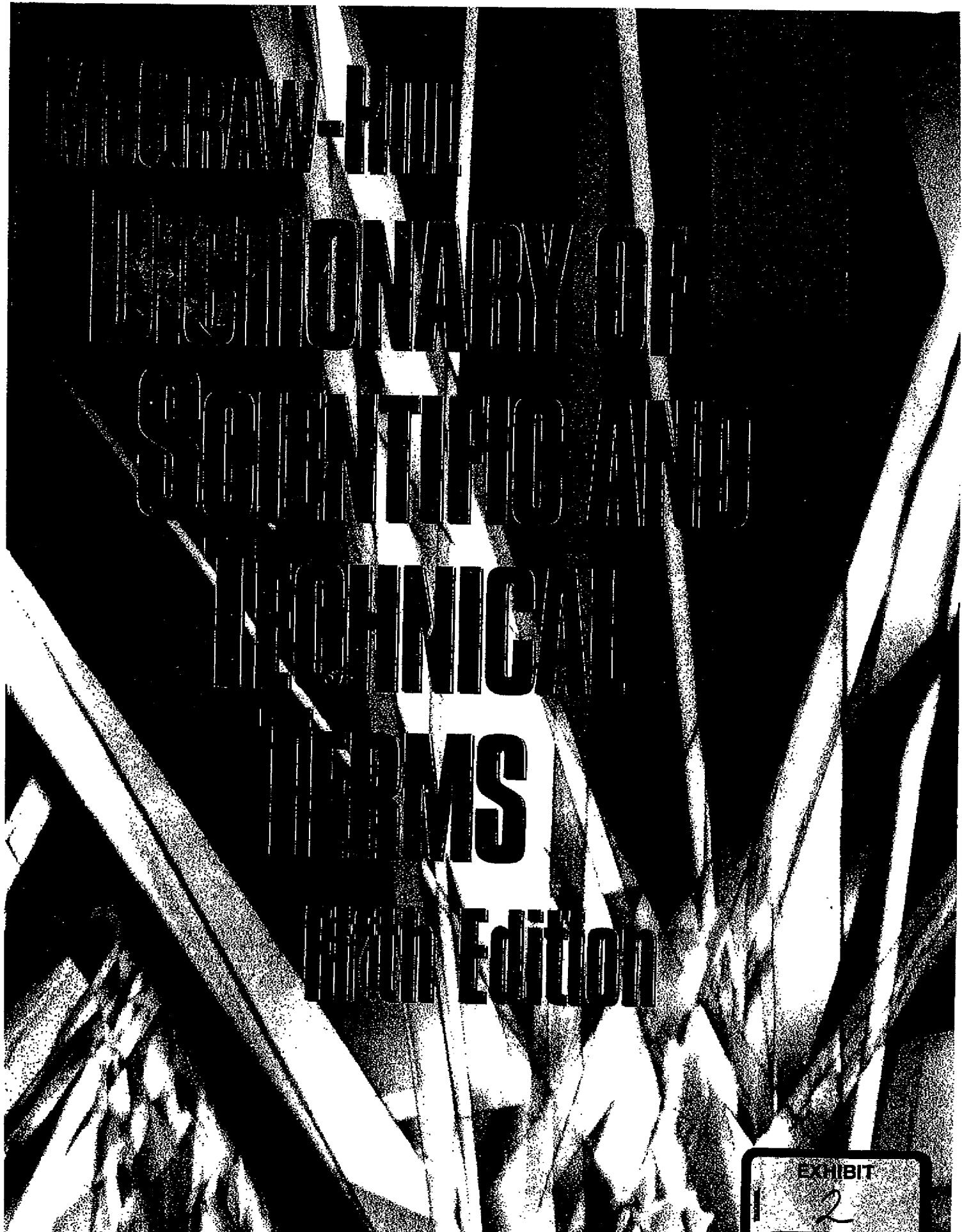
stylohyoid [ANAT] Pertaining to the styloid process of the temporal bone and the hyoid bone. { 'stü'lōhī'oid' }

styloid [ZOO] Resembling a style. { 'stü'lōid' }

STURGEON



Short-nosed sturgeon (*Acipenser brevirostris*).



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Fifth Edition

Sybil P. Parker

Editor in Chief

McGraw-Hill, Inc.

New York San Francisco Washington, D.C.
Auckland Bogotá Caracas Lisbon London Madrid Mexico
Montreal New Delhi San Juan Singapore Sydney Tokyo

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5 6 7 8 9 0 DOW/DOW 9 9

ISBN 0-07-042333-4

Library of Congress Cataloging-in-Publication Data

McGraw-Hill dictionary of scientific and technical terms /
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p. cm.

ISBN 0-07-042333-4

1. Science—Dictionaries. 2. Technology—Dictionaries.

I. Parker, Sybil P.

Q123.M34 1993

503—dc20

93-34772

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space polar coordinates

the permeability of a vacuum is arbitrarily taken as unity; in the meter-kilogram-second-ampere system, it is $4\pi \times 10^{-7}$. { 'spās ,pərmē-ə 'bil-gdē }

space polar coordinates [MATH] A system of coordinates by which a point is located in space by its distance from a fixed point called the pole, the colatitude or angle between the polar axis (a reference line through the pole) and the radius vector (a straight line connecting the pole and the point), and the longitude or angle between a reference plane containing the polar axis and a plane through the radius vector and polar axis. { 'spās 'pōl-ər ,kō-fōrd-ən-əts }

spaceport [AERO ENG] An installation used to test and launch spacecraft. { 'spās ,pōrt }

space power system [AERO ENG] An on-board assemblage of equipment to generate and distribute electrical energy on satellites and spacecraft. { 'spās ,pau̇r ,sɪs-təm }

space probe [AERO ENG] An instrumented vehicle, the payload of a rocket-launching system designed specifically for flight missions to other planets or the moon and into deep space, as distinguished from earth-orbiting satellites. { 'spās ,prōb }

space processing [ENG] The carrying out of various processes aboard orbiting spacecraft, utilizing the low-gravity, high-vacuum environment associated with these vehicles. { 'spās ,prēs'ēs-ɪg }

space quadrature [PHYS] A difference of a quarter-wavelength in the position of corresponding points of a wave in space. { 'spās ,kwād'rə-chər }

space quantization [QUANT MECH] The quantization of the component of the angular momentum of a system in some specified direction. { 'spās ,kwāntəzāshən }

spacer [ENG] 1. A piece of metal wire twisted at one end to form a guard to keep the explosive in a shothole in place and twisted at the other end to form a guard to hold the tampon in its place. 2. A piece of wood doweling interposed between charges to extend the column of explosive. 3. A device for holding two members at a given distance from each other. Also known as spacer block. 4. The tapered section of a plug joining the barrel to the die; clay is compressed in this section before it issues through the die. { 'spās-ər }

spacer block See spacer. { 'spās-ər ,blāk }

spacer deoxyribonucleic acid [MOL BIO] Untranscribed deoxyribonucleic acid (DNA) segments, usually containing repetitive DNA, of eukaryotic and some viral genomes flanking functional genetic regions (cistrons). { 'spās-ər dē'ak-sē ,rē'bō-nü-kē-ik əs'ēd }

space reconnaissance [AERO ENG] Reconnaissance of the surface of a planet from a space ship or satellite. { 'spās ri,kā-nəns }

space reddening [ASTRON] Reddening of light from distant stars caused by selective absorption of blue light by interstellar dust clouds. { 'spās ,red-ən'ēg }

space reflection symmetry See parity. { 'spās ri,fleks'hə-nē-tērē }

space request [COMPUT SCI] A parameter that specifies the amount of storage space required by a new file at the time the file is created. { 'spās ri,kwest }

space research [AERO ENG] Research involving studies of aspects of environmental conditions beyond the atmosphere of the earth. { 'spās ri,sərch }

space strip [MET] A strip or bar of metal placed in the root of a weld joint, prepared for a groove weld, to serve as backing and maintain root opening during welding. { 'spās-ər ,strip }

space satellite [AERO ENG] A vehicle, crewed or uncrewed, orbiting the earth. { 'spās ,sāt-əlit }

space ship See spacecraft. { 'spās ,ship }

space shuttle [AERO ENG] A reusable orbital spacecraft, designed to travel from the earth to an orbital trajectory and then return. { 'spās ,shāt-əl }

space simulator [AERO ENG] 1. Any device which simulates one or more parameters of the space environment and which is used to test space systems or components. 2. Specifically, a closed chamber capable of reproducing approximately the vacuum and normal environments of space. { 'spās ,sim'yə,lād }

space station [AERO ENG] An autonomous, permanent facility in space for the conduct of scientific and technological research, earth-oriented applications, and astronomical observations. { 'spās ,stā-shən }

space suit [ENG] A pressure suit for wear in space or at very

low ambient pressures within the atmosphere, designed to permit the wearer to leave the protection of a pressurized cabin. { 'spās ,süt }

space suppression [COMPUT SCI] Prevention of the normal movement of paper in a computer printer after the printing of a line of characters. { 'spās ,sə,preshən }

space technology [AERO, ENG] The systematic application of engineering and scientific disciplines to the exploration and utilization of outer space. { 'spās tek,nījō-đēj }

space-time [RELAT] A four-dimensional space used to represent the universe in the theory of relativity, with three dimensions corresponding to ordinary space and the fourth to time. Also known as space-time continuum. { 'spās 'tim }

space-time continuum See space-time. { 'spās 'tim kən'tin-yü-wēm }

space-to-mark transition [COMMUN] The transition from the space condition to the mark condition in telegraphic communication. { 'spās tō ,mārk tran'zishən }

Space Tracking and Data Acquisition Network [ENG] A network of ground stations operated by the National Aeronautics and Space Administration, which tracks, commands, and receives telemetry for United States and foreign unmanned satellites. Abbreviated STADAN. { 'spās 'trak-ēj ən ,dād-ə ,ak-we'zishən ,net,wrk }

space vehicle See spacecraft. { 'spās ,vē-əkəl }

space velocity [ASTRON] A star's true velocity with reference to the sun. [CHEM ENG] The relationship between feed rate and reactor volume in a flow process; defined as the volume or weight of feed (measured at standard conditions) per unit time per unit volume of reactor (or per unit weight of catalyst). { 'spās və,lās-ēd-ē }

space walk [AERO ENG] The movement of an astronaut outside the protected environment of a spacecraft during a space flight; the astronaut wears a spacesuit. { 'spās ,wōk }

space wave [ELECTROMAG] The component of a ground wave that travels more or less directly through space from the transmitting antenna to the receiving antenna; one part of the space wave goes directly from one antenna to the other; another part is reflected off the earth between the antennas. { 'spās ,wāv }

space weapon [ORD] A weapon that travels through space and is directed against an enemy target whether on the ground, in the air, or in space. { 'spās ,wēpən }

spacing [GRAPHICS] The arrangement of characters, words, lines, and other elements to give the most pleasing effect on a printed page. { 'spās-ɪg }

spacing bias See bias telegraph distortion. { 'spāc-ɪg ,bīs }

spacing clamp [PETRO ENG] A clamp for maintaining the rod string in the correct pumping position while the well is in the final stages of being fitted to the pump. { 'spās-ɪg ,klamp }

spacing pulse [COMMUN] In teletypewriter operation, the signal interval during which the selector unit is not operated. { 'spās-ɪg ,pəls }

spacing wave See back wave. { 'spās-ɪg ,wāv }

spacistor [ELECTR] A multiple-terminal solid-state device, similar to a transistor, that generates frequencies up to about 10,000 megahertz by injecting electrons or holes into a space-charge layer which rapidly forces these carriers to a collecting electrode. { 'spās-is-tər }

spackling [ENG] The process of repairing a part of a plaster wall or mural by cleaning out the defective spot and then patching it with a plastering material. { 'spak-ling' }

SPADATS See space detection and tracking system. { 'spād-əts }

spade [DES ENG] A shovellike implement with a flat oblong blade; used for turning soil by pushing against the blade with the foot. { 'spād' }

spade bolt [DES ENG] A bolt having a spade-shaped flattened head with a transverse hole, used to fasten shielded coils, capacitors, and other components to a chassis. { 'spād ,bōlt' }

spade drill [DES ENG] A drill consisting of three main parts: a cutting blade, a blade holder or shank, and a device, such as a screw, which fastens the blade to the holder; used for cutting holes over 1 inch (2.54 centimeters) in diameter. { 'spād ,dril' }

spade grip [ORD] D-shaped handle for pointing a gun, fastened on the rear of the receiver of certain flexible automatic weapons. { 'spād ,grip' }

spade lug [DES ENG] An open-ended flat termination for a wire lead, easily slipped under a terminal nut. { 'spād ,ləg' }

spadix [BOT] A fleshy spike that is enclosed in a leaflike